

REMARKS

Applicant submits this Response in response to the Office Action mailed January 5, 2005. Applicant has amended claims 9, 14 and 25 to correct minor informalities identified by Applicant on further review. No claims have been canceled. Claims 1-26 remain pending. No new matter has been added.

Applicant thanks the Examiner for the indication in paragraph 4 of the Office Action that claims 6-8 and 18-24 would be allowable if rewritten in independent form.

In paragraphs 1-3 of the Office Action, the Examiner has rejected claims 1, 2, 5, 9, 10, 13, 14 15, 25 and 26 under 35 U.S.C § 103 as being unpatentable over U.S. Patent Application Publication No. 2003/0093563 to Young et al. ("Young") in view of U.S. Patent Publication No. 2004/0208186 to Eichen et al. ("Eichen"). The Examiner has also rejected claims 3, 4, 11, 12, 16 and 17 under 35 U.S.C. § 103 as being unpatentable over Young in view of Eichen and further in view of U.S. Patent Application No. 2004/0136379 to Liao et al. ("Liao"). Applicant traverses these rejections, based on the following remarks.

The Examiner has asserted, in paragraph 2 of the Office Action, that Young allegedly describes "a method of operating a communications network including a firewall comprising the steps of: monitoring delays associated with the closing of ports corresponding to communications sessions following the termination of said communications sessions as indicated by session control signals." and references paragraphs [0007] and [0061]. (Office Action, p. 2.) Applicant respectfully disagrees because these paragraphs do not mention monitoring delays associated with the closing of ports and otherwise do not relate to that activity. Quite differently, Young actually describes a system that combines the functionality of several networking devices – for example, "Call Agent Proxy/Application Layer Gateway (ALG) for MGCP, SIP and H.323; Packet Traffic Shaper; Client Access Control Server (CAC); Firewall; NAT/Masquerading Server; Router; and DHCP server" – into a single device referred to as a "MAND", (Multimedia Access Network Device). (Young, ¶ 18.) The MAND is described as deployed between a WAN and a LAN serving a customer premise, which includes a VoIP phone. (Young, ¶¶ 44, 45.) In

describing the operation of the MAND in connection with VoIP communications, Young describes the dynamic opening and closing of UDP (User Datagram Protocol) ports for RTP/RTCP traffic:

As shown in Fig. 5, after the traffic shaping process 1144, packets received from the WANA 1132 go through a NAT translation 1146 and then an application layer gateway 1122 which maps the single public IP address of the MAND 1000 and the IP port number associated with a particular session to the private address and port number of the appropriate IP phone device 950. For VoIP and other media, the MAND maps MGCP, H.323 and/or SIP signaling packets between WAN 10 and LAN 30 ports. While connecting end points with media traffic, the MAND restricts the UDP (User Datagram Protocol) port range on the public WAN 10 side to the minimum required for the number of simultaneous calls desired by dynamically creating RTP and RTCP ports when a call is initiated and recycling those ports when a call is terminated. (Young, ¶ 55.)

As noted above, the description in Young at best describes dynamic opening and closing of UDP ports for VoIP communications, not the measurement of delays in such openings and closings. Thus, contrary to the Examiner's assertion, Young nowhere describes any monitoring of delays associated with either the closing or opening of ports corresponding to communications sessions – or even mentions that such delays are possible.

The Examiner has relied upon Eichen to allegedly show “generating an alert signal when a monitored closing delay exceeds a preselected threshold.” and references paragraph [0045]. (Office Action, p. 2.) Applicant respectfully disagrees because this paragraph does not discuss anything related to a delay exceeding a preselected threshold, but rather discusses when a failure state resulting from VoIP pings exceeds a given threshold, which is an entirely different parameter from that recited in Applicant's claim. The system described in Eichen implements a “VoIP ping” service which is used to verify that a particular VoIP endpoint is reachable. (Eichen, ¶ 32.) If a call setup message to the endpoint receives an affirmative response, the VoIP software records the endpoint as reachable. (Eichen, ¶ 32.) If the call setup message receives a rejection (or no response), the VoIP software records the endpoint as unreachable. (Eichen, ¶ 32.) The VoIP software can broadcast alarms to an administrator when VoIP pings result in failures that exceed a threshold. (Eichen, ¶ 32.) Accordingly, contrary to the Examiner's assertion, there is no description in Eichen of any alert signal that is generated when a monitored closing delay exceeds a threshold. The lack of such description in Eichen is not surprising, as

Eichen also provides no description of dynamic port assignment for VoIP communications or even the use of a firewall in conjunction with VoIP.

In addition to all of the above-noted shortcomings in Eichen with respect to the recited “generating”, for example in claim 1, it is noted that Eichen also does not cure the above-noted deficiency of Young with respect to the recited “monitoring”.

The Examiner has relied upon Liao to describe “adjusting network routing to reduce the load on the firewall system which triggered the alarm signal.” (Office Action, p. 3.) However, as was the case with Young and Eichen, Liao provides no description of monitoring of delays in opening or closing of ports for VoIP communications, or generating alerts based on such monitored delays, and thus does not overcome the deficiencies of Young or Eichen.

In contrast to Young, Eichen and Liao, claim 1 recites a method that includes:

monitoring delays associated with the closing of ports corresponding to communications sessions following the termination of said communications sessions as indicated by session control signals; and
generating an alert signal when a monitored closing delay exceeds a preselected threshold.

Taken either individually or in combination, Young, Eichen and Liao do not teach or suggest the elements of claim 1. For example, there is no description in Young, Eichen or Liao of the monitoring of any delays associated with the closing of ports corresponding to communications sessions, or the generation of an alert signal when a monitored closing delay exceeds a threshold. The absence of these claim elements from claim 1 indicates that claim 1 is patentable over Young, Eichen and/or Liao, and Applicant respectfully requests that the Examiner withdraw the rejection of claim 1. Furthermore, as claims 2-5 each depend from claim 1, and therefore include all of the limitations of claim 1, claims 2-5 are patentable over Young, Eichen and/or Liao for at least the same reasons given for patentability of claim 1. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 2-5 as well.

Also in contrast to Young, Eichen and Liao, claim 9 recites a method that includes:

monitoring delays associated with the opening of ports corresponding to communications sessions being initiated through the use of session control signals; and
generating an alert signal when a monitored opening delay exceeds a preselected threshold.

As was the case for claim 1, Young, Eichen and Liao, taken individually or in combination, neither teach nor suggest the elements of claim 9. For example, there is no description in Young, Eichen or Liao of the monitoring of any delays associated with the opening of ports corresponding to communications sessions, or the generation of an alert signal when a monitored opening delay exceeds a threshold. The absence of these claim elements from claim 9 indicates that claim 9 is patentable over Young, Eichen and/or Liao, and Applicant respectfully requests that the Examiner withdraw the rejection of claim 9. Furthermore, as claims 10-13 each depends from claim 9, and therefore includes all of the limitations of claim 9, claims 10-13 are patentable over Young, Eichen and/or Liao for at least the same reasons given for patentability of claim 9. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 10-13 as well.

Also in contrast to Young, Eichen and Liao, claim 14 recites a system that includes:

a firewall system responsive to session signals to open and close ports in response to the establishment and termination of communications sessions, respectively;
means for monitoring said firewall to detect a port closing delay following a signal to terminate a communications session; and
an alarm generation device for generating an alarm when the port closing delay is determined to exceed a preselected threshold.

Taken either individually or in combination, Young, Eichen and Liao neither teach nor suggest the system recited by claim 14. For example, none of Young, Eichen or Liao teach or suggest any means for monitoring a firewall to detect a port closing delay following a signal to terminate a communications session, or an alarm generation device for generating an alarm when the port closing delay is determined to exceed a preselected threshold. The absence of these elements of claim 14 indicates that claim 14 is patentable over Young, Eichen and/or Liao, and Applicant respectfully requests that the Examiner withdraw the rejection of claim 14. As claims 15-17 and 26 depend from claim 14, and therefore include all of the limitations of claim 14, claims 15-17 and 26 are patentable over Young, Eichen and/or Liao for at least the same reasons given for

patentability of claim 14, and Applicant respectfully requests that the Examiner withdraw the rejections of claim 15-17 and 26 as well.

Also in contrast to Young, Eichen and Liao, claim 25 recites a system that includes:

- a firewall system responsive to session signals to open and close ports in response to the establishment and termination of communications sessions, respectively;

- means for monitoring said firewall to detect a port opening delay following a signal to establish a communications session; and

- an alarm generation device for generating an alarm when the port opening delay is determined to exceed a preselected threshold.


Taken either individually or in combination, Young, Eichen and Liao neither teach nor suggest the system recited by claim 25. For example, none of Young, Eichen or Liao teach or suggest any means for monitoring a firewall to detect a port opening delay following a signal to establish a communications session, or an alarm generation device for generating an alarm when the port opening delay is determined to exceed a preselected threshold. The absence of these elements of claim 25 in any or all of these references indicates that claim 25 is patentable over Young, Eichen and/or Liao, and Applicant respectfully requests that the Examiner withdraw the rejection of claim 25.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that the pending claims are in condition for allowance.¹ Reconsideration and allowance are respectfully requested. Accordingly, Applicant requests that the Examiner pass this application to issue. If there are any outstanding issues which need to be resolved to place the application in condition for allowance, the Examiner is invited to contact Applicant's undersigned representative by phone at the number indicated below to discuss such issues. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to deposit account number 07-2347. With respect to this application, please charge any other necessary fees and credit any overpayment to that account.

Respectfully submitted,

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¹ As Applicant's remarks with respect to the base independent claims are sufficient to overcome the Examiner's rejections of all claims dependent therefrom, Applicant's silence as to the Examiner's assertions with respect to dependent claims is not a concession by Applicant to the Examiner's assertions as to these claims, and Applicant reserves the right to analyze and dispute such assertions in the future. Likewise, as Applicant's remarks with respect to rejections based on alleged prior art are sufficient to overcome the Examiner's rejections, Applicant's silence as to certain requirements applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references) is not a concession by Applicant that such requirements have been met, and Applicant reserves the right to analyze and dispute such in the future.